

ABSTRACT

A positive active material is provided which can inhibit side reactions between the positive electrode and an electrolyte even at a high potential and which, when applied to a battery, can improve charge/discharge cycle performance without impairing battery performances even in storage in a charged state. Also provided are: a process for producing the active material; a positive electrode for lithium secondary batteries which employs the active material; and a lithium secondary battery which has improved charge/discharge cycle performance while retaining intact battery performances even after storage in a charged state and which can exhibit excellent charge/discharge cycle performance even when used at a high upper-limit voltage. The positive active material comprises: base particles able to dope and release lithium ions; and an element in Group 3 of the periodic table present on at least part of that part of the base particles which is able to come into contact with an electrolyte. It is produced by, e.g., a process which comprises: producing base particles containing lithium and able to dope and release lithium ions; and then imparting an element in Group 3 of the periodic table to the base particles so that the element can be present on at least part of that part of the base particles which is able to come into contact with an

electrolyte.